

TIP35A/35B/35C
TIP36A/36B/36C

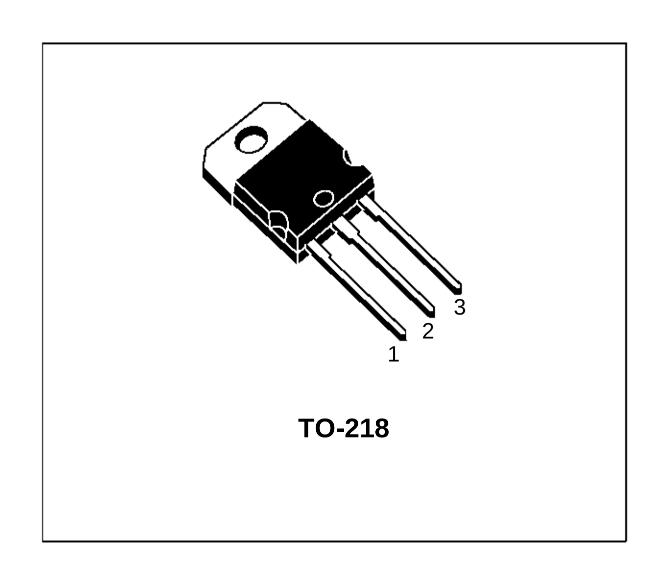
COMPLEMENTARY SILICON HIGH POWER TRANSISTORS

- TIP35B, TIP35C, TIP36B, AND TIP36C ARE SGS-THOMSON PREFERRED SALESTYPES

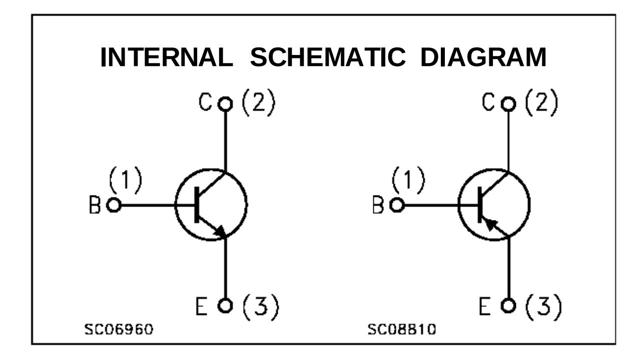
DESCRIPTION

The TIP35A, TIP35B and TIP35C are silicon epitaxial-base NPN transistors in TO-218 plastic package. They are intented for use in power amplifier and switching applications.

The complementary PNP types are TIP36A, TIP36B and TIP36C.



TO-218



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter		Value			Unit
		NPN	TIP35A	TIP35B	TIP35C	
		PNP	TIP36A	TIP36B	TIP36C	
V_{CBO}	Collector-Base Voltage (I_E = 0)		60	80	100	V
V_{CEO}	Collector-Emitter Voltage (I_B = 0)		60	80	100	V
V_{EBO}	Emitter-Base Voltage (I_C = 0)		5			V
I_C	Collector Current		25			A
I_{CM}	Collector Peak Current		50			A
I_B	Base Current		5			A
P_{tot}	Total Dissipation at $T_{case} \leq 25\ ^oC$		125			W
T_{stg}	Storage Temperature		-65 to 150			^oC
T_j	Max. Operating Junction Temperature		150			^oC

For PNP types voltage and current values are negative.

THERMAL DATA

$R_{thj\text{-}case}$	Thermal Resistance Junction-case	Max	1	$^oC/W$

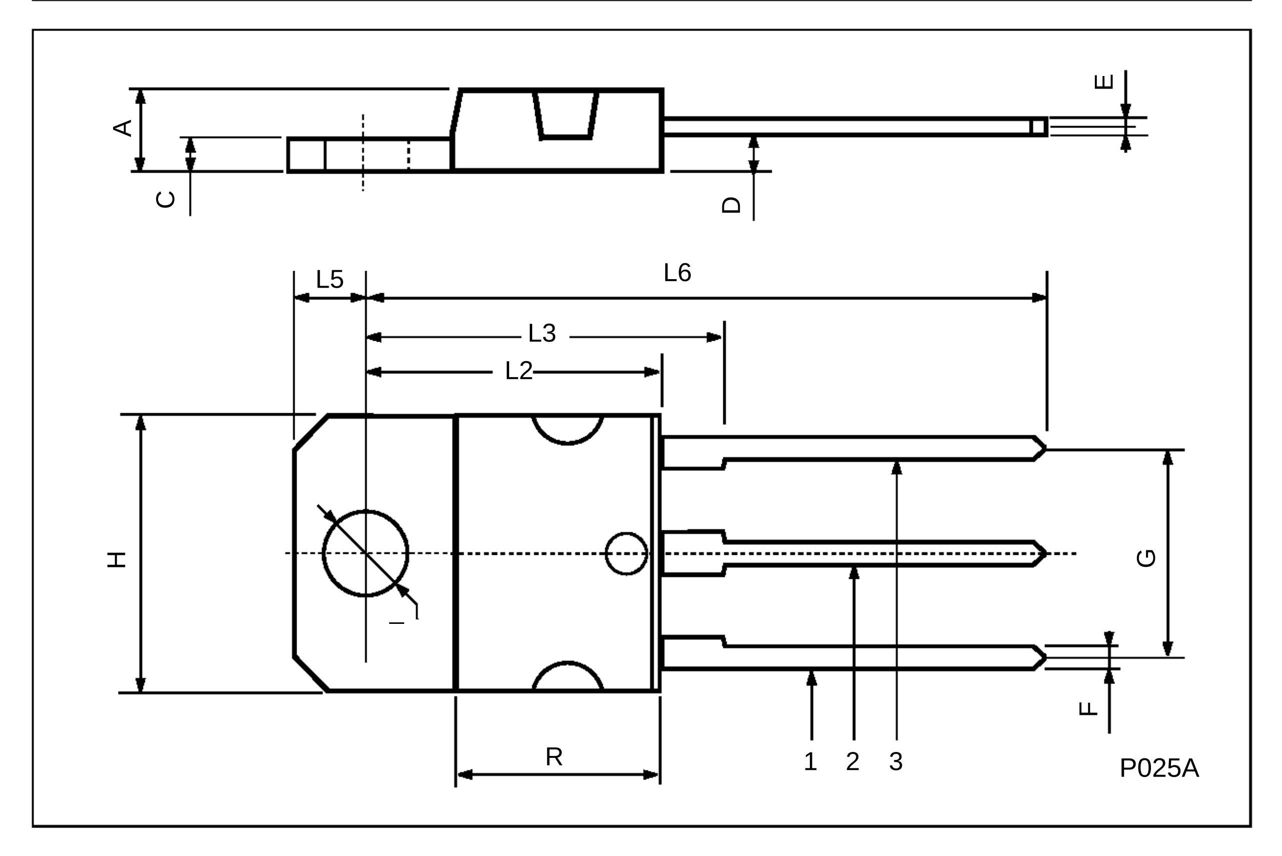
ELECTRICAL CHARACTERISTICS (T_{case} = 25 ^oC unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cut-off Current (I_B = 0)	for **TIP35A/36A** V_{CE} = 30 V for **TIP35B/35C/36B/36C** V_{CB} = 60 V			1 1	mA mA
I_{EBO}	Emitter Cut-off Current (I_C = 0)	V_{EB} = 5 V			1	mA
I_{CES}	Collector Cut-off Current (V_{BE} = 0)	V_{CE} = Rated V_{CEO}			0.7	mA
$V_{CEO(sus)}$*	Collector-Emitter Sustaining Voltage (I_B = 0)	I_C = 30 mA for **TIP35A/36A** for **TIP35B/36B** for **TIP35C/36C**	 60 80 100			 V V V
h_{FE}*	DC Current Gain	I_C = 1.5 A V_{CE} = 4 V I_C = 15 A V_{CE} = 4 V	25 10		 50	
$V_{CE(sat)}$*	Collector-Emitter Saturation Voltage	I_C = 15 A I_B = 1.5 A I_C = 25 A I_B = 5 A			1.8 4	V
$V_{BE(on)}$*	Base-Emitter Voltage	I_C = 15 A V_{CE} = 4 V I_C = 25 A V_{CE} = 4 V			2 4	V V
f_T	Transition Frequency	I_C = 1 A V_{CE} = 10 V f = 1 MHz	3			MHz
h_{fe}	Small Signal Current Gain	I_C = 1 A V_{CE} = 10 V f = 1 KHz	25			

∗ Pulsed: Pulse duration = 300 μs, duty cycle ≤ 2 %
For PNP types voltage and current values are negative.

TO-218 (SOT-93) MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	4.7		4.9	0.185		0.193
C	1.17		1.37	0.046		0.054
D		2.5			0.098	
E	0.5		0.78	0.019		0.030
F	1.1		1.3	0.043		0.051
G	10.8		11.1	0.425		0.437
H	14.7		15.2	0.578		0.598
L2	–		16.2	–		0.637
L3		18			0.708	
L5	3.95		4.15	0.155		0.163
L6		31			1.220	
R	–		12.2	–		0.480
Ø	4		4.1	0.157		0.161




SGS-THOMSON
MICROELECTRONICS